

**Amendment Accompanying RCE filed November 1, 2007
U.S. Patent Application Serial No. 10/798,889**

REMARKS

Claims 1-8 are pending in this application, with claims 6 and 7 currently withdrawn from consideration. The present amendment cancels claims 2 and 3 without prejudice or disclaimer, amends claims 1 and 4, and adds new claims 9-13. Upon entry of this amendment, claims 1 and 4-13 will be pending, with claims 6 and 7 withdrawn from consideration.

No new matter is added by this amendment. Support for the amendments to the claims is detailed below.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (AAPA) in view of Horn (U.S. Patent 4,660,266). (Office action item no. 2)

Reconsideration of the rejection is respectfully requested in view of the amendment to claim 1. Support for the amendment to claim 1 may be found in canceled claims 2 and 3, and in the specification, as follows:

(a) forming short, cylindrical first workpieces (30, 30') made of the second material and each having a cylindrical inside surface (30a) serving as the bearing surface;

(b) placing at least one of said first workpieces (30, 30') in a mold (50) with a cavity (56) formed around the first workpiece (30, 30');

(c) pouring said first material in molten state into said cavity (56) around the first workpiece (30, 30') placed in the mold (50) to metallurgically bond together the first workpiece and the second workpiece along an interface therebetween, to thus form, in the mold (50), a primary workpiece (34, 34') having at least one semifinished workpiece (33) including the first workpiece (30, 30') and the second workpiece (32, 32') integrally combined with each other; and

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(d) dividing the primary workpiece (34, 34') removed from the mold (50) into halves along a center plane (P2) including a center axis of the cylindrical inside surface (30a) of the first workpieces (30, 30') to obtain two substantially equivalent secondary workpieces (35, 35) for forming two equivalent bearing members.

Horn (US 4,660,266) states in column 1, lines 40-41: "if the half shell is made by cutting open a flange which has been extruded as a total unit." This statement simply teaches cutting a totally manufactured (extruded) article into two, and nothing more. It is to be noted that Horn discloses manufacturing a flange connector for connecting pipes or hoses, while the method of the present invention relates, as typically shown in Fig.2 of this application, to manufacturing a bearing member made up of a body part (21) made of a first material of a light alloy, and a semi-cylindrical shaft bearing part (22) made of a second material of a light-alloy-base material different from the light alloy forming the body part (21).

Applicant submits that three steps of (a) "forming short, cylindrical first workpieces....," (b) "placing at least one of said first workpieces in a mold ...," and (c) "pouring said first material in molten state" of amended claim 1 are not disclosed or even suggested at all by Horn. The method of Horn does not treat a dual-material article made up of a cylindrical bearing part and a body part supporting the bearing part, as in amended claim 1, but treats a single material flange connector. Therefore, what is suggested by Horn does not include anything about (a) forming a short, cylindrical first workpiece (30, 30'), (b) placing the first workpieces (30, 30') in a mold (50) with a cavity (56) formed around the first workpiece (30, 30'), and (c) pouring the first material in molten state into the cavity (56) around the first workpiece (30, 30') placed in the mold (50) to metallurgically bond together the first workpiece and the second workpiece along an interface therebetween, to thus form

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a primary workpiece (34, 34') in the mold (50). Such specific casting steps are never taught by Horn. What is generally taught by Horn is a dividing step only.

It is to be noted that Horn suggests dividing a totally extruded article into two but teaches nothing about dividing into two a dual-material article (primary workpiece) that is manufactured by casting. According to the present invention, the two materials or parts are metallurgically bonded during the casting step and then divided into two. Thus the metallurgical bonding step need not be carried out for each bearing member (secondary workpiece), whereby the manufacturing steps are reduced. It is a time-consuming and costly procedure to create a metallurgical bond between the bearing part and the body part for each of the bearing members after the bearing part and the body part are separately manufactured. Furthermore, the bearing members are manufactured by dividing a single primary workpiece whereby the bearing members are given a uniform functional quality, which contributes to the stability of the crankshaft bearing function.

It is thus believed that Horn does not render obvious the specific steps including the above explained casting step set forth in amended claim 1 since the method of Horn does not include a casting step at all and cannot provide the advantages described above.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (AAPA) as applied to claim 3 above, and further in view of Beyer-Steinhauser et al. (DE 19959540). (Office action item no. 3)

Reconsideration of the rejection is respectfully requested in view of the amendments to the claims. Claim 4 has been amended to depend from claim 1. Applicant submits that the combination of AAPA and Beyer-Steinhauser et al. does not provide the limitations of amended base claim 1,

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and that claim 4 is not obvious over “AAPA” and Beyer-Steinhauser et al., taken separately or in combination.

Regarding claim 8.

Applicant respectfully notes that claims 5 and 8 were not explicitly stated as rejected in the headings of items no. 2 and 3 in the final Office action, although claim 5 was mentioned in the rejection in item no. 2 (rejection under 103(a) over AAPA and Horn). However, there appears to be no rejection given for claim 8, and no discussion of the limitations of claim 8, in the final Office action. Applicant's arguments above regarding base claim 1 are applicable to dependent claim 8.

Regarding new claims 9-13.

Support for new claim 9 may be found, for example, on page 18, lines 2-12, of the specification. Support for claim 10 may be found, for example, on page 1, first paragraph. Support for claim 11 may be found, for example, at page 15, lines 17 and ff. Support for new claim 12 may be found, for example, at page 33, lines 14-22. Support for new claim 13 may be found, for example, at page 13, line 23, to page 14, line 4.

The recitation of claim 9 may be seen in the embodiment in the specification wherein the mold (50) is arranged such that when the first workpiece (30, 30') is placed in the mold (50), a cavity (56) is formed around the first workpiece, which cavity has a substantially square shape with four corner portions, as viewed in a center axis direction of the cylindrical first workpieces (30, 30'), and the step of pouring the first material in molten state into the cavity is carried out by pouring the first material at the four corner portions of the cavity. The advantage obtainable by such arrangement is

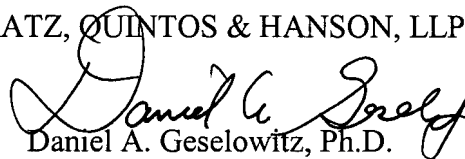
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described in the paragraph beginning at page 23, line 10, of the specification. That is, molten metal poured into the cavity of the mold flows uniformly around the first workpiece, whereby the semifinished workpiece and the secondary workpiece can be formed in an improved quality, which is effective in stabilizing the function of the bearing member. Applicant submits that new claims 9-13 are not obvious over the cited references.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the Applicant's' undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,
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Enclosure: RCE Transmittal

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